



## Discovery Mission To Hubble Up Next

Following completion of a flight readiness review meeting, NASA managers set Feb. 11 as the official launch date for NASA's second Shuttle mission of the year.

The mission, designated STS-82, is the second in a series of planned servicing missions to the orbiting Hubble Space Telescope (HST). Following rendezvous with and retrieval of the HST on the third day of the mission, four space walks on four successive days will take place as the astronauts remove and replace various Hubble components.

The STS-82 crew trained extensively for their servicing activities, among other things spending 168 hours in Marshall's Neutral Buoyancy Simulator. Work performed on the telescope will significantly upgrade its scientific capabilities and keep the telescope functioning smoothly until the next scheduled servicing mission in 1999.

The launch window on Feb. 11 opens at 2:56 a.m. CST and extends for 65 minutes. Discovery's mission duration is planned for nine days, 22 hours, 47 minutes.

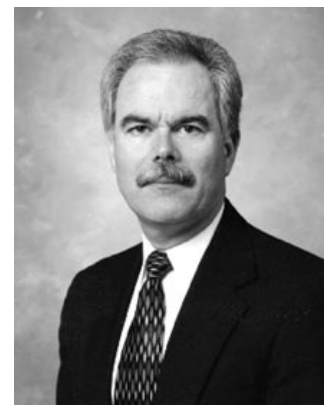


NASA Associate Administrator for Aeronautics Dr. Robert Whitehead (standing second from right) visited the Marshall Center last week for an overview of Center programs and to see activities. Accompanying him are (from left sitting) Ames Center Director Dr. Henry McDonald; Deputy Director of Dryden Kevin Peterson; (standing from left) Lewis Center Director Donald Campbell; Marshall Center Director Dr. Wayne Littles; Whitehead; and Langley Center Director Dr. Jeremiah Crendon.

## Hightower Named New Director of Personnel

Danny Hightower, deputy director of the Marshall Center Personnel Office since 1994, has been appointed director of that office. He succeeds Frank Bynum, who has retired. Hightower joined Marshall in 1971 as a student trainee in the Center's Cooperative

Education program. He has held positions in all areas of personnel management and administration including staffing, employee relations, position classifications and labor relations. In 1991, he was selected for the NASA Professional Development Program and spent a year at NASA Headquarters in the Office of Human Resources and Education.



Danny Hightower

## Goldin to Brief on NASA Budget; Littles to Discuss Center Outlook

The NASA fiscal year 1998 budget briefing has been scheduled for noon CST on Thursday. NASA Administrator Daniel Goldin will conduct the briefing, which will be held at Agency Headquarters and broadcast live centerwide on NASA TV.

Following the Headquarters briefing, Marshall Center Director Dr. Wayne Littles will make a presentation to Marshall employees about the budget outlook and answer employee questions. That presentation will be in Morris Auditorium at 2 p.m. and also will be televised centerwide.

The noon briefing by Goldin can also be viewed in Morris Auditorium.

## Inside...

**Photos of STS-82 Space Flight Awareness Honorees — Page 3**

# ***During Black History Month***

## **1963 Cooperative Education Student Reflects on Marshall Experience**

*"I have dedicated my administration to the cause of equal opportunity in employment by the Government..."*

*President John F. Kennedy, Executive Order 10925*

*"This nation should commit itself to achieving the goal, before this decade is out, of landing a man on the Moon and returning him safely to Earth..."*

*President John F. Kennedy, May 25, 1961*

*By Mike Wright, Marshall Center Historian*

When President Kennedy established these two far-reaching national goals in the early 1960s, Hugh McKnight was a young student preparing to attend Southern University in Baton Rouge, Louisiana.

He had decided to study engineering. "One of my high school instructors was very instrumental in getting me to consider engineering... I had not really thought about engineering early on like my daughter who is a mechanical engineer," McKnight says almost 35 years later in 1997.

However, a high school teacher's motivation, McKnight's decision, President Kennedy's goals, and the combined efforts of Southern University and the Marshall Center all came together in the fall of 1963.

The Marshall Star of Nov. 6, 1963, featured a story and photograph of six young engineering students from Southern University examining an RL-10 liquid hydrogen rocket engine at the Marshall Center. Hugh McKnight, now Dr. Hugh McKnight, was among that group of cooperative education students.

At the time, Southern University had become one of the latest schools to sign a co-operative training agreement with the Marshall Center. All of the students were majoring in electrical engineering.

As part of Black History Month at the Marshall Center, McKnight is one of the six former coop students who have

recently been located by the Marshall Center Equal Opportunity Office and asked to reflect on their experiences as young minority engineering students working for NASA in the early 1960s.

McKnight completed a full year of cooperative education working part of the year at Marshall and at its Michoud Assembly Facility near New Orleans.

"It was certainly a different kind of experience and a new experience for me to be pursuing a degree in engineering and to get the opportunity to work at the space center," McKnight said.

"It was an adventurous type of an experience for me. It gave me some feel for what engineers would do once they are out in the workforce," he added referring to the "national high priority to get a man on the moon."

A little less than six years later, when Neil Armstrong set foot on the moon, McKnight said, in a small way, he felt like he was part of it all. "A little student from Mississippi/ Louisiana, I had made my contribution."

McKnight was assigned to the Center's Stage Analysis Checkout Section, working with engineers conducting simulated firings of systems and stages. "I spent a good deal of my time on the drafting board drawing and redrawing circuitry for the booster electrical systems. I spent some time up in the labs actually simulating booster operations. I was able to interact with degreed engineers in the work place and get a feel for what they did beyond college. It motivated me to hang in and hang on."

McKnight is now a practicing dentist in Baton Rouge. Although he admits he does not follow the space program now as closely as he did as a cooperative education student, he believes

*continued on page 5*

## **Reese Named AA for EO Programs**

NASA Administrator Daniel S. Goldin has named George E. Reese to the position of Associate Administrator for Equal Opportunity Programs. Reese has been acting associate administrator of that office since January 1996.

Before assuming that role, Reese served as the Agency's Deputy General Counsel. Prior to holding that position, he was Associate General Counsel for General Law for six years, and a Senior Attorney and Attorney Advisor for the previous ten years.

For the past ten years he has served as the NASA representative and U.S. delegate to the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space, and he served for many years as the Chairman of the NASA Contract Adjustment Board.



*Dr. Arnold Torres (left), senior manager at Wallops Flight Facility, Va., and director of Suborbital Projects and Operations Directorate, visited the Marshall Center last week with Ray Stanley (right) and Bruce Underwood, both of the Policy and External Relations Office at Wallops. They discussed potential areas of cooperation involving Wallops and Marshall. During the visit, they met with Marshall Director Dr. Wayne Littles and Deputy Director Carolyn Griner.*

# Space Flight Awareness Honorees

These 18 Marshall employees are being honored with a trip to the launch of STS-82 at the Kennedy Space Center in recognition of their dedication to space flight as part of NASA's Space Flight Awareness program.



*Charlotte Campbell, AI41*



*Theresa Christopher, CR60*



*Linda Dinges, SA45*



*Bertha Gildon, EH25*



*George Harvey, GP40*



*Shirley Hovis, CM41*



*Charlie Jones, JA64*



*Nancy McLeroy, TA11*



*Anita McQuay, BR20*



*Opal Meek, EB31*



*Shelve Miller, CE01*



*Cathy Nichelson, FA51*



*Brian Pung, EE11*



*Sharon Quick, EJ41*



*Anne Sims, EM41*



*David Smitherman, PP02*



*Richard Thompson, EP51*



*Ricky Wilbanks, ED72*



A superb Hubble Space Telescope image, recently released by the Space Telescope Science Institute, captured details of the Lagoon Nebula. The image reveals a pair of one-half light-year long interstellar "twisters" — eerie funnels and twisted-rope structures — in the heart of the nebula, which lies 5,000 light-years away in the direction of the constellation Sagittarius.

## MMA to Offer Two Scholarships

The Marshall Management Association Merit Scholarship, an award to recognize academic achievement and leadership qualities of sons and daughters of Marshall employees and retirees, will award two \$1,500 scholarships to freshmen entering an accredited college or university in the fall of 1997. One scholarship will be awarded to a student pursuing a degree in the scientific and technical area. The other will be awarded to a student pursuing a degree in the area of business, administration, art, education, etc. Additional information on the scholarships and applications is available in Room 31 of Building 4250 or by calling 544-3221. The deadline for submitting an application is April 15.

### *With Grateful Appreciation*

Dear Marshall Family,

Thank you for all the different ways you have shown love and concern for my family during the illness and recuperation of my son following his automobile accident in December.

Glynda Thomas

## Bynum Reception Changed to March 6

The retirement reception for Frank Bynum, former director of Marshall's Personnel Office, has been rescheduled for March 6 from 1 to 3 p.m. in Building 4200, Room G-13. Employees, retirees and on-site contractors are invited.

## Shelby's Washington Update Is Topic of Feb. 17 Luncheon

The Huntsville/Madison County Chamber of Commerce and the Business Council of Alabama invite Marshall Center employees to a Washington Update Luncheon with U. S. Senator Richard Shelby of Alabama at noon on Feb. 17 in the Von Braun Center. Tickets cost \$20.

Shelby's committee assignments include Chairman of the Select Committee on Intelligence; Committee on Appropriations: Chairman, sub-committee on Transportation; member of sub-committees on Defense, Veterans Affairs and Housing and Urban Development; and Treasury, Postal and General Government; and a member of Banking, Housing and Urban Affairs and the Special Committee on Aging.

Those who are interested in attending should contact Mary Rutledge of the Public Affairs Office at 4-5252 by Feb. 10.

## Marshall Recycling Committee Has Earth Day T-Shirt Logo Contest

The Marshall Recycling Committee is inviting all Center employees and on-site contractors to participate in its Earth-Day T-shirt logo contest. The theme is "Recycling...Pick Up The Pace." The submission must be a picture on 8.5" by 11" white paper and must have no more than 4 colors. Each employee can enter as many designs as he or she wishes. The winner of the contest will receive \$50. Send entries with name and phone number on back of the design to Reginald Alexander, PD21, or Cedreck Davis, AB31, by Feb. 26.

### Obituaries

**Berger, Edwin, 67**, Fayetteville, Tenn., died Dec. 6. He retired from Marshall in 1981 where he worked in experimental facilities and equipment.

**Butler, Earl, 69**, Huntsville, died Jan. 9. He retired from Marshall in 1971 where he worked in flight systems. He is survived by his wife Nell Butler.

**Cater, Albert, 77**, Anniston, died Jan. 2. He retired from Marshall in 1973, having worked as an aerospace engineering technician.

**Weaver, Richard, 72**, Huntsville, died Dec. 3. He retired from Marshall in 1988 where he worked as a program analyst. He is survived by his wife Nancy Weaver.

**Wilder, Paul, 75**, Grant, died Jan. 11. He was an electronics technician before retiring from Marshall in 1975. He is survived by his wife Betty Wilder.

**Willard, James, 72**, Huntsville, died Jan. 11. He retired from Marshall in 1980 where he worked as an aerospace engineering technician. He is survived by his wife, Mary Willard.

## Implementing the Strategic Plan:

### An MSFC Profile

*All Marshall employees have been provided with a copy of the NASA Strategic Plan, along with the Marshall Center's implementation document. The Implementation Plan, to be updated annually, explains how we at Marshall plan to carry out the NASA Agency and Enterprise strategies. Center Director Dr. Wayne Little has stressed the importance of each employee reading the plan and understanding what it means regarding how his or her work supports NASA's goal and missions. To facilitate that understanding, the Star is presenting several examples of how selected individuals fit into the plan's structure. The Implementation Plan and a feedback survey are now on the Web at <http://www.msfc.nasa.gov/general/intro.html>. This is the fourth of a five-part series.*

#### ROBIN NEELY



#### Occupational specialty

Deputy Manager,  
Microgravity Research Program Office

• **NASA Strategic enterprises supported:** Human Exploration and Development of Space Enterprise

#### • **Where I fit and what it means to me:**

"Marshall has been assigned the role of Agency Lead for Microgravity Research, which the HEDS Enterprise has designated as one of its primary programs for executing its mission of opening the space frontier. The HEDS Enterprise mission, and the goals established to meet that mission, rely

heavily on the success of the Microgravity Research Program, which is where I fit in. Microgravity Research provides ground and space based research opportunities for increasing human knowledge of basic processes. It enables NASA to facilitate the use of space for developing commercial products and services, and to develop innovative engineering technologies. We at Marshall are executing this program in partnership with academia, industry and other government agencies, both nationally and internationally. Together, we perform research that will enhance the quality of life on earth, provide the knowledge to improve systems and processes required for space exploration, and provide the gateway for industry to use the space environment for commercial application."

#### • **Reaction to the strategic planning process:**

"I think strategic planning really is of vital importance to the Agency. It establishes the direction NASA will take, and lays a roadmap to reach the future. The Agency's strategic plan enables me to see where NASA is headed. Marshall's strategic plan shows me what I have to do today to make sure NASA achieves its vision for the future."

## McKnight

*from page 2*

the value of his experience at Marshall went beyond drawing circuits and conducting simulated firings.

McKnight describes his own upbringing in very positive terms. "My parents recognized the value of an education, but they weren't teachers or lawyers. I got where I am not because I had great dreams early on. It wasn't by chance. We had teachers in high school who kind of leaned on us and encouraged us in science and math in high school."

The greatest need that many minority students have today, says McKnight, is "to be identified by parents and teachers... They should be properly counseled and encouraged and steered in the direction of science and engineering... These kids need to be identified, encouraged, and cultivated long before high school graduation."

McKnight doesn't like what he calls "Mickey Mouse" courses that allow people to graduate from high school. "They are not ready to go to college in terms of the lighter stuff, much less science and engineering... I think it is a long slow process that starts back at least in middle school..."

He fondly remembers arriving in Huntsville and some of the arrangements that were made early on for him and his fellow students by individuals in the community and by Alabama A&M, one of his first stops upon arrival. "I think the first night we came to town we ended up over at Alabama A&M. We got our start from A&M. We were little kids on the block. Many of us were from rural Louisiana and Mississippi."

But McKnight's experience at Marshall also coincided with a tumultuous era in American history. "I guess the one thing outside of the center that was such an emotional blow for us was when Kennedy got assassinated. We were at work that day and that came in over the communication system," recalls Dr. McKnight, whose intense desire to succeed coincided with two promises a young President made to his country before he passed into history.

## Employee Ads

### Miscellaneous

- ★ Wood splitter 7 h.p. motor mounted on trailer, \$200. 205-586-7424
- ★ Brass bed, queen size, no mattress or foundation, \$75. 539-6114
- ★ Mobile home, 1991 Eagle 14 x 80, new carpet, central H/A, deck, \$18,000. 852-3133
- ★ AKC Female Dalmatian 2 yrs. old. \$150. 734-8649
- ★ Small kitchen table, \$60; Samsung microwave, \$35. 880-9074
- ★ Drapes pair double 83x114, lined scenic, 4 lengths green lined 83x43, all custom made. 881-8879
- ★ Exerciser pro sport bicycle type, \$30. 205-586-7424
- ★ Bath transfer seat for elderly, \$60; IBM Selectric typewriter, \$30. 837-6776
- ★ Time Life Books, "Voyage thru Universe", 19 vols, and "Understanding Computers" 23 Vols., \$150 each set. 615-433-2401
- ★ Baby Items: carseats, highchair, walker, travel-crib, swing, strollers; Kitchenaid mixer, \$75, Cabinet sewing machine, \$100. 880-7106

### Vehicles

- ★ 1992 Toyota Camry LE; 4-Dr, auto trans., power, air, 63k miles; one owner, \$9,900. 883-9194
- ★ 1995 Nissan, Kingcab pickup, 4 cyl, 5spd, 33K miles, warranty. \$11,400. 205-582-2187 or 656-6330
- ★ 1990 Nissan Hardbody 2-door PU, 5-speed midnite-blue, 74K miles, \$4,800 o.b.o 881-7967
- ★ 1993 Saturn SC2, blue green w/tan leather interior, 5 spd, sunroof, cassette/CD, pwr win/doors, 45K miles, \$11,250. 350-1537
- ★ 1988 Honda Civic CRX, 77K miles, new tires, \$4,500 or best offer. 533-7098
- ★ 1991 Celica ST, 5-speed, \$7,100; 1988 Accord LX, automatic, \$4,100. 880-9025

- ★ 1985 Buick Century, 75K miles, V-6, A/C, 4-door, \$1,950. 518-9644
- ★ 1990 Buick Riviera, 2-door coupe, ruby red, 72K miles, \$8,000. 881-2601
- ★ 1966 Chevy pickup 350 small block engine, 4 spd. new tires, \$1,500 o.b.o. 772-7343
- ★ 1991 Aerostar XLT van, fully equipped, hitch, 110K miles, \$4,800. 883-5472
- ★ 1985 Honda Prelude, red, 5spd, sunroof, cruise control, alloy wheels, 139K miles, \$2,900. 461-8721

### Wanted

- ★ Small garden tiller. 721-0078
- ★ Artists opaque projector. 852-4379

### Found

- ★ Hewlett-Packard scientific calculator in 4203 north parking lot Jan. 10. Contact Lanny Upton at 4-6590

## Center Announcements

- ☛ **Emergency Warning System Test** — The monthly test of the Emergency Warning System will be held Feb. 6 at 3 p.m.
- ☛ **MARS 1997 Soccer** — MARS Soccer will start this year in early March. Starting Feb. 8, pickup games for any interested persons will be held on Sundays at 1 p.m. on the MARS soccer fields. Further questions please call Bob Linner at 4-3833, or Jim Lomas at 4-8305.
- ☛ **Facilities Office Retirement Breakfast** — at Shoney's restaurant on Feb. 11 at 8:30 a.m., University & Parkway.
- ☛ **AFGE Meeting** — AFGE Local 3434 will hold its monthly meeting Feb. 11 at 11:30 a.m. in Building 4202, Room 224.
- ☛ **Auction of Government Surplus Property** — A local auction of Government surplus property will be held at 8:30 a.m. Feb. 11, at the Defense Reutilization and Marketing Office, Bldg. 7427, Chestnut Rd., Redstone Arsenal. To view material for sale or further information call 876-2453 or 842-2570.
- ☛ **MARS Valentine Dance** — Tickets for the Feb. 15 Valentine Dance are now on sale by the MARS Ballroom Dance Club.

Tickets are \$18 per person with a \$3 discount for members. Tickets may be purchased from Tamara Landers (4-6818); Pat Sage (4-5427); Ron Brock (4-0768); Ed Ogozalek (837-1486); and Bob Williams (4-3998).

☛ **Engineers Week Award Banquet** — Huntsville/Madison County Engineers Week Award Banquet will be held on Feb. 20 at Huntsville Marriott. The speaker will be Nancy Archuleta, CEO of Mevatec Corporation. Tickets are \$20.00 and deadline for purchase is Feb. 17. Tickets may be purchased through UAH at 890-6474.

☛ **NARFE** — The National Association of Retired Federal Employees will meet Feb. 8 at the Senior Center on Drake Ave. Presenter will be Bill Harrison, Tax-Aide instructor for the AARP. For more information, call 837-0382 or 881-3168.

☛ **Spring Public Boating Course** — The U. S. Power Squadron will conduct its annual Spring Public Boating Course Feb. 18. Cost for course materials is \$20.00. For registration or more information call 722-9237 or 859-6063.

☛ **Miniaturized Sensors and Engines Presented at Workshop** — MICOM hosted a one day workshop on Jan. 15 on Microelectromechanical systems and their applications. If you would like more information or would like to become part of an informal working group in this field, call Robby Newton at 4-7880.

## Job Opportunities

**CPP 97-7-PL, Administrative Officer**, GS-341-9/11, Human Resources and Administrative Support Ofc., Closes Feb. 12.  
**CPP 97-9-CV, Secretary(OA)**, GS-318-7/8, Payload Projects Office, Closes Feb. 10.  
**Reassignment Bulletin 97-6-RE, AST**, GS-861-13, Safety and Mission Assurance Ofc., SSME Assurance Ofc, Closes Feb. 18.  
**Reassignment Bulletin 97-7-CV**, Program Analyst, GS-343-7/9/11/12, Payload Project Ofc., Science and Applications Projects Ofc., Closes Feb. 18.

# MARSHALL STAR

Marshall Space Flight Center, Alabama 35812

The Marshall Star is Published every Wednesday by the Public Affairs Office at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration. Contributions should be submitted no later than Friday noon to the Marshall Public Affairs Office (CA10), Building 4200. Submissions should be written legibly and include the originator's name. The Marshall Star does not publish commercial advertising of any kind.

Writer-Editor — Angela D. Storey  
 Director, Media Services — David B. Drachlis  
 Director of Public Affairs — John B. Taylor  
 U.S. Government Printing Office 1997-532-111-40047

BULK RATE  
 Postage & Fees PAID  
**NASA**  
 Permit No. G-27